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IS 10601 (1983): Dimensions of terminals of high voltage switchgear and control gear [ETD 8: High Voltage Switchgear and Controlgear]



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IS : 10601 - 1983

Indian Standard

DIMENSIONS FOR TERMINALS OF
HIGH VOLTAGE SWITCHGEAR AND
CONTROLGEAR

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NEW DELHI 110002

Indian Standard

DIMENSIONS FOR TERMINALS OF HIGH VOLTAGE SWITCHGEAR AND CONTROLGEAR

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Indian Standard

DIMENSIONS FOR TERMINALS OF HIGH VOLTAGE SWITCHGEAR AND CONTROLGEAR

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 28 June 1983, after the draft finalized by the High Voltage Switchgear and Controlgear Sectional Committee had been approved by the Electrotechnical Division Council.

2.0 Dimensional standardization of terminals of high voltage switchgear and controlgear had been carried out in several countries proving to be a useful tool in interchangeability. Dimensional standardization at the international level had been taken up with a view to catering to both copper and aluminium terminal designs, taking into account the different types of constructional features in vogue. It concerns the kinds of apparatus that are subjected to international trade.

0.3 Aluminium is frequently used in the terminals of both high and low voltage switchgear in the country. The dimensions of terminals depend on choice of alloys and mechanical loadings, changing from design to design. Different types of terminals are also in use, namely, palm type, threaded type and plain clamp type.

0.4 In order to circumvent the difficulties of interchangeability and to facilitate export, as a first step towards total dimensional standardization, it has been found acceptable to cover recommended dimensions of terminals without any correlation with rated voltage, rated normal current or application of the equipment.

0.5 For the time being, the dimensions are restricted to the diameters and the distances between holes in the case of terminals with rectangular shape and diameters and lengths in the case of terminals with cylindrical shape. This standard also does not recommend the use of any particular type of material for terminals.

0.6 In the preparation of this standard, considerable assistance has been derived from IEC Pub 518(1975) 'Dimensional standardization of terminals of high voltage switchgear and controlgear' issued by the

International Electrotechnical Commission. However, to cover local needs, 18 mm size has been added as an additional size of hole diameter for terminals with rectangular shape.

0.7 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers dimensions for terminals of high voltage switchgear and controlgear, such as circuit-breakers, disconnectors and switches. The application of this standard is however not excluding other HV switchgear equipment.

1.2 The terminals conforming to the dimensions given in this standard can be made of any suitable material and no coordination between the dimensions and the rated normal current is being given.

2. TERMINALS WITH CYLINDRICAL SHAPE

2.1 The following dimensions are recommended (*see also* Fig. 1):

Diameter	d	20	30	30	40	60 (mm)
Corresponding	L	80	80	125	125	125 (mm)

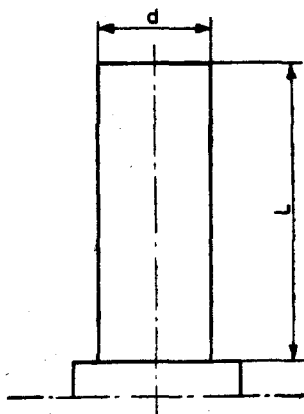


FIG. 1 TERMINALS WITH CYLINDRICAL SHAPE

*Rules for rounding off numerical values (*revised*).

3. TERMINALS WITH RECTANGULAR SHAPE

3.1 The recommended dimensions for rectangular terminals shall be restricted to the diameters of and the distances between the holes.

The dimensions are :

Hole diameters : 14 mm, 18 mm and 22 mm

Distance between holes : 40 mm, 45 mm, 50 mm and 60 mm
(centre to centre)

Any possible combination of these dimensions is permitted.

The distance between holes shall apply to two adjacent holes, both along the abscissa and the ordinate.

INDIAN STANDARDS

ON

HIGH VOLTAGE SWITCHGEAR AND CONTROLGEAR

IS:

- 375-1963 Marking and arrangements for switchgear busbars, main connections and auxiliary wiring (*revised*)
- 1818-1972 Alternating current isolators (disconnectors) and earthing switches (*first revision*)
- 1885 (Part 17)-1979 Electrotechnical vocabulary: Part 17 Switchgear and controlgear (*first revision*)
- 2032 (Part 7)-1974 Graphical symbols used in electrotechnology: Part 7 Switchgear and auxiliaries (*first revision*)
- 2516 (Part 1/Sec 2)-1980 Circuit breakers: Part 1 General and definitions, Sec 2 For voltages above 1 000 V ac
- 2516 (Part 2/Sec 2)-1980 Circuit breakers: Part 2 Rating, Sec 2 For voltages above 1 000 V ac
- 2516 (Part 3/Sec 2)-1980 Circuit breakers: Part 3 Design and construction, Sec 2 For voltages above 1 000 V ac
- 2516 (Part 4/Sec 2)-1980 Circuit breakers: Part 4 Type tests and routine tests, Sec 2 For voltages above 1 000 V ac
- 2516 (Part 5/Sec 2)-1980 Circuit breakers: Part 5 Information to be given with enquiries, tenders and orders and rules for transport, erection and maintenance, Sec 2 For voltages above 1 000 V ac
- 3427-1969 Metal-enclosed switchgear and controlgear for voltages above 1 000 V but not exceeding 11 000 V
- 4710-1968 Switches and switch isolators above 1 000 V but not exceeding 11 000 V
- 5561-1970 Electric power connectors
- 7567-1975 Automatic reclosing circuit breakers (automatic circuit reclosers) for ac distribution system
- 8084-1976 Interconnecting busbars for ac voltage above 1 kV up to and including 36 kV
- 9046-1978 ac contactors of voltage above 1 000 V up to and including 11 000 V
- 9135-1979 Guide for testing of circuit breakers with respect to out-of-phase switching
- 9385 (Part 1)-1979 High voltage fuses: Part 1 Current limited fuses
- 9385 (Part 2)-1980 High voltage fuses: Part 2 Expulsion and similar fuses
- 9385 (Part 3)-1980 High voltage fuses: Part 3 Application guide for high voltage fuses
- 9402-1980 High voltage fuses for the external protection of shunt power capacitors
- 9920 (Part 1)-1981 Alternating current switches for voltages above 1 000 V: Part 1 General and definitions
- 9920 (Part 2)-1982 Alternating current switches for voltages above 1 000 V: Part 2 Rating
- 9920 (Part 3)-1982 Alternating current switches for voltages above 1 000 V: Part 3 Design and construction
- 9921 (Part 1)-1981 Alternating current disconnectors (isolators) and earthing switches for voltages above 1 000 V: Part 1 General and definitions
- 9921 (Part 2)-1982 Alternating current disconnectors (isolators) and earthing switching for voltages above 1 000 V: Part 2 Rating
- 9921 (Part 3)-1982 Alternating current disconnectors (isolators) and earthing switches for voltage above 1 000 V: Part 3 Design and construction
- 10118 (Part 1)-1982 Code of practice for selection, installation and maintenance of switchgear and controlgear: Part 1 General maintenance
- 10118 (Part 3)-1982 Code of practice for selection, installation and maintenance of switchgear and controlgear: Part 3 Installation
- 10118 (Part 4)-1982 Code of practice for selection installation and maintenance of switchgear and controlgear: Part 4 Maintenance